

**Definitions: Frequency**

<b>Term</b>	<b>Meaning</b>
Highly Likely (H)	The potential for impact is probable (near 100 percent) in the next year.
Likely (L)	The potential for impact is between 10 and 100 percent in the next year. or There is at least one chance of occurrence within the next 10 years.
Possible (P)	The potential for impact is between 1 and 10 percent within the next year. or There is at least one chance of occurrence within the next 100 years.
Unlikely (U)	The potential for impact is less than 1 percent in the next 100 years.

**Definitions: Magnitude and Potential Severity**

<b>Number</b>	<b>Descriptor</b>	<b>Definition</b>
1	Catastrophic	<ul style="list-style-type: none"><li>▪ Multiple deaths</li><li>▪ Complete shutdown of critical facilities for 30 days or more</li><li>▪ More than 50 percent of property is severely damaged</li></ul>
2	Critical	<ul style="list-style-type: none"><li>▪ Injuries and/or illnesses result in permanent disability</li><li>▪ Complete shutdown of critical facilities for at least 2 weeks</li><li>▪ More than 25 percent of property is severely damaged</li></ul>
3	Limited	<ul style="list-style-type: none"><li>▪ Injuries and/or illnesses do not result in permanent disability</li><li>▪ Complete shutdown of critical facilities for more than 1 week</li><li>▪ More than 10 percent of property is severely damaged</li></ul>
4	Negligible	<ul style="list-style-type: none"><li>▪ Injuries and/or illnesses are treatable with first aid</li><li>▪ Minor quality of life lost</li><li>▪ Shutdown of critical facilities and services for 24 hours or less</li><li>▪ No more than one percent of property is severely damaged</li></ul>

## Sample Risk Index Worksheet

Risk Index Worksheet				
Hazard	Frequency	Magnitude	Potential Severity	Response Priority
Release at XYZ facility	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
Derailment at ABC switch	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
Spill on I-81, exit 13	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low

How often  
might this  
incident occur?

What is the  
likely **impact**?

How bad  
could it get?

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Release at XYZ facility	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input checked="" type="checkbox"/> <b>High</b> <input type="checkbox"/> Medium <input type="checkbox"/> Low
Derailment at ABC switch	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input checked="" type="checkbox"/> <b>High</b> <input type="checkbox"/> Medium <input type="checkbox"/> Low
Spill on I-81, exit 13	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input checked="" type="checkbox"/> <b>Medium</b> <input type="checkbox"/> Low